

OIPK

12

CRF Errors Corrected by the STIC Systems Branch

CRF Processing Date: 9/12/2001

Edited by: ALVerified by: AL

(STIC stat

Serial Number: 09/912,628

**ENTERED**

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically: \_\_\_\_\_
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other \_\_\_\_\_
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: \_\_\_\_\_
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: \_\_\_\_\_
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: \_\_\_\_\_
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: \_\_\_\_\_
- ☐ Deleted extra, invalid, headings used by an applicant, specifically: \_\_\_\_\_
- ☐ Deleted: ☐ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file;  
☐ page numbers throughout text; ☐ other invalid text, such as \_\_\_\_\_
- ☐ Inserted mandatory headings, specifically: \_\_\_\_\_
- ☐ Corrected an obvious error in the response, specifically: \_\_\_\_\_
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: \_\_\_\_\_
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted ending stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: \_\_\_\_\_
- ☒ Other: inserted closing bracket in C1107

Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

3/1/95

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/912,628

DATE: 09/12/2001

TIME: 11:52:23

Input Set : A:\Pto.amc

Output Set: N:\CRF3\09122001\I912628.raw

P.5

2 <110> APPLICANT: Ni et al.

4 <120> TITLE OF INVENTION: Human Serpin Polynucleotides, Polypeptides, and Antibodies

6 <130> FILE REFERENCE: PT001P2

C--> 8 <140> CURRENT APPLICATION NUMBER: US/09/912,628

9 <141> CURRENT FILING DATE: 2001-07-26

11 <150> PRIOR APPLICATION NUMBER: PCT/US01/02484

12 <151> PRIOR FILING DATE: 2001-01-26

14 <150> PRIOR APPLICATION NUMBER: 60/178,769

15 <151> PRIOR FILING DATE: 2000-01-28

17 <150> PRIOR APPLICATION NUMBER: PCT/US00/05082

18 <151> PRIOR FILING DATE: 2000-02-29

20 <160> NUMBER OF SEQ ID NOS: 17

22 <170> SOFTWARE: PatentIn Ver. 2.0

25 <210> SEQ ID NO: 1

26 <211> LENGTH: 733

27 <212> TYPE: DNA

28 <213> ORGANISM: Homo sapiens

30 <400> SEQUENCE: 1

31	gggatccgga	gcccaaatct	tctgacaaaa	ctcacacatg	cccaccgtgc	ccagcacctg	60
32	aattcgaggg	tgcaccgtca	gtcttctctt	tcccccaaaa	acccaaggac	accctcatga	120
33	tctcccggac	tcctgaggtc	acatgcgtgg	tggtagacgt	aagccacgaa	gaccctgagg	180
34	tcaagttcaa	ctggtacgtg	gacggcgtgg	aggtgcataa	tgccaagaca	aagccgcggg	240
35	aggagcagta	caacagcacg	taccgtgtgg	tcagcgtcct	caccgtcctg	caccaggact	300
36	ggctgaatgg	caaggagtac	aagtgcaagg	tctccaacaa	agccctccca	acccccatcg	360
37	agaaaaccat	ctccaaagcc	aaagggcagc	cccgagaacc	acaggtgtac	accctgcccc	420
38	catcccggga	tgagctgacc	aagaaccagg	tcagcctgac	ctgcctggtc	aaaggcttct	480
39	atccaagcga	catcgccgtg	gagtgaggaga	gcaatgggca	gccggagaa	aactacaaga	540
40	ccacgcctcc	cgtgctggac	tccgacggct	ccttcttctt	ctacagcaag	ctcaccgtgg	600
41	acaagagcag	gtggcagcag	gggaacgtct	tctcatgctc	cgtgatgcat	gaggtctctg	660
42	acaaccacta	cacgcagaag	agcctctccc	tgtctccggg	taaagttagtg	cgacggccgc	720
43	gactctagag	gat					733

46 <210> SEQ ID NO: 2

47 <211> LENGTH: 1710

48 <212> TYPE: DNA

49 <213> ORGANISM: Homo sapiens

51 <400> SEQUENCE: 2

52	gcagggctca	ccaaccatgc	aaggacaggg	caggagaaga	ggaacctgca	aagacatatt	60
53	ttgttccaaa	atggcatctt	acctttatgg	agtactcttt	gctgttggcc	tctgtgtctc	120
54	aatctactgt	gtgtccccgg	ccaatgcccc	cagtgcatac	ccccgccttt	cctccacaaa	180
55	gagcaccctt	gcctcacagg	tgtattccct	caacaccgac	tttgcccttc	gcctataccg	240
56	caggctgggt	ttggagacct	cgagtcagaa	catcttcttc	tccccgtgta	gtgtctccac	300
57	ttccctggcc	atgtctctcc	ttggggccca	ctcagtcacc	aagaccaga	ttctccaggg	360
58	cctgggcttc	aacctcacac	acacaccaga	gtctgccatc	caccagggtt	tccagcacct	420
59	ggttcactca	ctgactgttc	ccagcaaa	cctgaccttg	aagatgggaa	gtgccctctt	480
60	cgtcaagaag	gagctgcagc	tgcaggcaaa	tttcttgggc	aatgtcaaga	ggctgtatga	540
61	agcagaagtc	ttttctacag	atttctccaa	cccctccatt	gcccaggcga	ggatcaacag	600
62	ccatgtgaaa	aagaagacct	aagggaaggt	tgtagacata	atccaaggcc	ttgaccttct	660

## RAW SEQUENCE LISTING

DATE: 09/12/2001

PATENT APPLICATION: US/09/912,628

TIME: 11:52:23

Input Set : A:\Pto.amc

Output Set: N:\CRF3\09122001\I912628.raw

63	gacggccatg	gttctggtga	accacatttt	ctttaaagcc	aagtgggaga	agccctttca	720
64	ccctgaatat	acaagaaaga	acttcccatt	cctggtgggc	gagcaggtca	ctgtgcatgt	780
65	ccccatgatg	caccagaaag	agcagttcgc	ttttggggtg	gatacagagc	tgaactgctt	840
66	tgtgctgcag	atggattaca	agggagatgc	cgtggccttc	tttgtcctcc	ctagcaaggg	900
67	caagatgagg	caactggaac	aggccttgtc	agccagaaca	ctgagaaagt	ggagccactc	960
68	actccagaaa	aggtggatag	aggtgttcat	ccccagattt	tccatttctg	cctcctacaa	1020
69	tctggaaacc	atcctcccga	agatgggcat	ccaaaatgtc	tttgacaaaa	atgctgattt	1080
70	ttctggaatt	gcaaagagag	actccctgca	ggtttctaaa	gcaaccacac	aggctgtgct	1140
71	ggatgtcagt	gaagagggca	ctgaggccac	agcagctacc	accaccaagt	tcatagtccg	1200
72	atcgaaggat	ggccctctt	acttccactgt	ctccttcaat	aggaccttcc	tgatgatgat	1260
73	tacaaataaa	gccacagacg	gtattctctt	tctagggaaa	gtggaaaatc	ccactaaatc	1320
74	ctaggtggga	aatggcctgt	taactgatgg	cacattgcta	atgcacaaga	aataacaaac	1380
75	cacatccctc	tttctgttct	gaggggtgcat	ttgaccccag	tggagctgga	ttcgctggca	1440
76	gggatgccac	ttccaaggct	caatcaccaa	accatcaaca	gggaccccag	tcacaagcca	1500
77	acaccatta	accccagtca	gtgccctttt	ccacaaatc	tcccaggtaa	ctagcttcat	1560
78	gggatgttgc	tgggttacca	tatttccatt	ccttggggct	cccaggaatg	gaaatacgcc	1620
79	aaccaggtt	aggcacctct	attgcagaat	tacaataaca	cattcaataa	aactaaaata	1680
80	tgaattcatc	tgtcaaaaaa	aaaaaaaaaa				1710
83	<210> SEQ ID NO: 3						
84	<211> LENGTH: 1632						
85	<212> TYPE: DNA						
86	<213> ORGANISM: Homo sapiens						
88	<400> SEQUENCE: 3						
89	gagcccacca	agcccgggct	cctgccttcc	ctctttaagg	gactcagaga	gaccctctcc	60
90	cgcaacctgg	aactgggctt	cacacagggg	agttttgcct	tcattccaca	ggattttgat	120
91	gtcaaagaga	ctttcttcaa	tttatccaag	aggtattttg	atacagagtg	cgtgcctatg	180
92	aatttttcga	atgcctcaca	ggccaaaagg	ctcatgaatc	attacattaa	caaagagact	240
93	cgggggaaaa	ttcccacaa	gtttgatgag	attaatcctg	aaaccaaatt	aattcttgtg	300
94	gattacatct	tgttcaaagg	gaaatggttg	accccatctt	accctgtctt	caccgaagtc	360
95	gacactttcc	acctggacaa	gtacaagacc	attaagggtc	ccatgatgta	cagtgcaggc	420
96	aagtttgcct	ccacctttga	caagaatttt	cgttgtcatg	tcctcaaact	gccctaccaa	480
97	ggaaatgcca	ccatgctggt	ggtcctcatg	gagaaaatgg	gtgaccacct	cgcccttgaa	540
98	gactacctga	ccacagactt	ggtggagaca	tggctcagaa	acatgaaaac	cagaaacatg	600
99	gaagttttct	ttccgaagtt	caagctagat	cagaagtatg	agatgcatga	gctgcttagg	660
100	cagatgggaa	tcagaagaat	cttctcaccc	tttgctgacc	ttagtgaact	ctcagctact	720
101	ggaagaaatc	tccaagtatc	caggggtttt	caaagaacag	tgattgaagt	tgatgaaagg	780
102	ggcactgagg	cagtggcagg	aatcttgtca	gaaattactg	cttattccat	gcctcctgtc	840
103	atcaaagtgg	accggccatt	tcatttcatg	atctatgaag	aaacctctgg	aatgcttctg	900
104	tttctgggca	gggtggtgaa	tccgactctc	ctataattca	ggacacgcac	aagcacttct	960
105	tgctgtagta	gatgctgaat	ctgaggatc	aaacacacac	aggataccag	caatggatgg	1020
106	caggggagag	tgttcctttt	gttcttaact	agtttagggg	gttctcaaat	aaatacagta	1080
107	gtccccactt	atctgagggg	gatacattca	aagaccccca	gcagatgcct	gaaacggtgg	1140
108	acagtgtctga	accttatata	tattttttcc	tacacatata	tacctatgat	aaagttaaat	1200
109	ttataaatta	ggcacagtaa	gagatttaaca	ataataacaa	cattaagtaa	aatgagttac	1260
110	ttgaacgcaa	gcactgcaat	accataacag	tcaaactgat	tatagagaag	gctactaagt	1320
111	gactcatggg	cgaggagcat	agacagtgtg	gagacattgg	gcaaggggag	aattcacatc	1380
112	ctgggtggga	cagagcagga	caatgcaaga	ttccatccca	ctactcagaa	tggcatgctg	1440
113	cttaagactt	ttagattgtt	tatttctgga	atttttcatt	taatgttttt	ggaccatggg	1500
114	tgaccatggg	taactgagac	tgcagaaagc	aaaaccatgg	ataagggagg	actactacaa	1560

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/912,628

DATE: 09/12/2001  
 TIME: 11:52:23

Input Set : A:\Pto.amc  
 Output Set: N:\CRF3\09122001\I912628.raw

```

115 aagcattaaa ttgatacata ttttttaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1620
116 aaaaaaaaaa aa 1632
119 <210> SEQ ID NO: 4
120 <211> LENGTH: 706
121 <212> TYPE: DNA
122 <213> ORGANISM: Homo sapiens
124 <220> FEATURE:
125 <221> NAME/KEY: SITE
126 <222> LOCATION: (635)
127 <223> OTHER INFORMATION: n equals a,t,g, or c
129 <220> FEATURE:
130 <221> NAME/KEY: SITE
131 <222> LOCATION: (655)
132 <223> OTHER INFORMATION: n equals a,t,g, or c
134 <400> SEQUENCE: 4
135 ggcacgagct tcgctcctgg gcagctgcgc ggagaactgg ggctcaccgt catggatgct 60
136 ctatcagaag caaatggcac atttgcatga aaccttttga aaaagctagg ggaaaaaac 120
137 tcaaacaact tatttttttc cccatgagca tatcatcagc cttggccatg gttttcatgg 180
138 gggcaaaggg aaacactgca gctcagatgt ctcaggcact ttgttttagt aaaatcggag 240
139 gtgaagatgg agatattcat cgagggtttc agtcacttct tgttgcaatt aacagaactg 300
140 acactgaata tgtgcttaga actgccaacg ggctctttgg agaaaagtct tatgatttcc 360
141 tcacagggttt tacagattcc tgtggcaaat tctaccaagc aacgataaaa cagctagact 420
142 ttgtgaatga tacagagaag tccacaacac gtgtaaaactc ctgggttgct gataaaacta 480
143 aagcctggaa aattattcaa acaagcctgt cacatctgga ggagccagga atcgctcttt 540
144 cctcttgta ctgcaaagcc tgcccttcac agcccctact ggttcactct attcccaaat 600
W--> 145 gcaactctcc tgtgaccccg catggcatgt ggtgncctcc ctccctgtga gcagntgtga 660
146 ctaataaact gccgccaatt tcactctgtaa aaaaaaaaaa aaaaaa 706
149 <210> SEQ ID NO: 5
150 <211> LENGTH: 435
151 <212> TYPE: PRT
152 <213> ORGANISM: Homo sapiens
154 <400> SEQUENCE: 5
155 Met Gln Gly Gln Gly Arg Arg Arg Gly Thr Cys Lys Asp Ile Phe Cys
156 1 5 10 15
158 Ser Lys Met Ala Ser Tyr Leu Tyr Gly Val Leu Phe Ala Val Gly Leu
159 20 25 30
161 Cys Ala Pro Ile Tyr Cys Val Ser Pro Ala Asn Ala Pro Ser Ala Tyr
162 35 40 45
164 Pro Arg Pro Ser Ser Thr Lys Ser Thr Pro Ala Ser Gln Val Tyr Ser
165 50 55 60
167 Leu Asn Thr Asp Phe Ala Phe Arg Leu Tyr Arg Arg Leu Val Leu Glu
168 65 70 75 80
170 Thr Pro Ser Gln Asn Ile Phe Phe Ser Pro Val Ser Val Ser Thr Ser
171 85 90 95
173 Leu Ala Met Leu Ser Leu Gly Ala His Ser Val Thr Lys Thr Gln Ile
174 100 105 110
176 Leu Gln Gly Leu Gly Phe Asn Leu Thr His Thr Pro Glu Ser Ala Ile
177 115 120 125
179 His Gln Gly Phe Gln His Leu Val His Ser Leu Thr Val Pro Ser Lys

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/912,628

DATE: 09/12/2001

TIME: 11:52:23

Input Set : A:\Pto.amc

Output Set: N:\CRF3\09122001\I912628.raw

```

180      130      135      140
182 Asp Leu Thr Leu Lys Met Gly Ser Ala Leu Phe Val Lys Lys Glu Leu
183 145      150      155      160
185 Gln Leu Gln Ala Asn Phe Leu Gly Asn Val Lys Arg Leu Tyr Glu Ala
186      165      170      175
188 Glu Val Phe Ser Thr Asp Phe Ser Asn Pro Ser Ile Ala Gln Ala Arg
189      180      185      190
191 Ile Asn Ser His Val Lys Lys Lys Thr Gln Gly Lys Val Val Asp Ile
192      195      200      205
194 Ile Gln Gly Leu Asp Leu Leu Thr Ala Met Val Leu Val Asn His Ile
195      210      215      220
197 Phe Phe Lys Ala Lys Trp Glu Lys Pro Phe His Pro Glu Tyr Thr Arg
198 225      230      235      240
200 Lys Asn Phe Pro Phe Leu Val Gly Glu Gln Val Thr Val His Val Pro
201      245      250      255
203 Met Met His Gln Lys Glu Gln Phe Ala Phe Gly Val Asp Thr Glu Leu
204      260      265      270
206 Asn Cys Phe Val Leu Gln Met Asp Tyr Lys Gly Asp Ala Val Ala Phe
207      275      280      285
209 Phe Val Leu Pro Ser Lys Gly Lys Met Arg Gln Leu Glu Gln Ala Leu
210      290      295      300
212 Ser Ala Arg Thr Leu Arg Lys Trp Ser His Ser Leu Gln Lys Arg Trp
213 305      310      315      320
215 Ile Glu Val Phe Ile Pro Arg Phe Ser Ile Ser Ala Ser Tyr Asn Leu
216      325      330      335
218 Glu Thr Ile Leu Pro Lys Met Gly Ile Gln Asn Val Phe Asp Lys Asn
219      340      345      350
221 Ala Asp Phe Ser Gly Ile Ala Lys Arg Asp Ser Leu Gln Val Ser Lys
222      355      360      365
224 Ala Thr His Lys Ala Val Leu Asp Val Ser Glu Glu Gly Thr Glu Ala
225      370      375      380
227 Thr Ala Ala Thr Thr Thr Lys Phe Ile Val Arg Ser Lys Asp Gly Pro
228 385      390      395      400
230 Ser Tyr Phe Thr Val Ser Phe Asn Arg Thr Phe Leu Met Met Ile Thr
231      405      410      415
233 Asn Lys Ala Thr Asp Gly Ile Leu Phe Leu Gly Lys Val Glu Asn Pro
234      420      425      430
236 Thr Lys Ser
237      435
240 <210> SEQ ID NO: 6
241 <211> LENGTH: 311
242 <212> TYPE: PRT
243 <213> ORGANISM: Homo sapiens
245 <400> SEQUENCE: 6
246 Glu Pro Thr Lys Pro Gly Leu Leu Pro Ser Leu Phe Lys Gly Leu Arg
247 1      5      10      15
249 Glu Thr Leu Ser Arg Asn Leu Glu Leu Gly Leu Thr Gln Gly Ser Phe
250      20      25      30
252 Ala Phe Ile His Lys Asp Phe Asp Val Lys Glu Thr Phe Phe Asn Leu

```

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/912,628

DATE: 09/12/2001  
TIME: 11:52:23

Input Set : A:\Pto.amc  
Output Set: N:\CRF3\09122001\I912628.raw

```

253          35          40          45
255 Ser Lys Arg Tyr Phe Asp Thr Glu Cys Val Pro Met Asn Phe Arg Asn
256          50          55          60
258 Ala Ser Gln Ala Lys Arg Leu Met Asn His Tyr Ile Asn Lys Glu Thr
259 65          70          75          80
261 Arg Gly Lys Ile Pro Lys Leu Phe Asp Glu Ile Asn Pro Glu Thr Lys
262          85          90          95
264 Leu Ile Leu Val Asp Tyr Ile Leu Phe Lys Gly Lys Trp Leu Thr Pro
265          100          105          110
267 Phe Asp Pro Val Phe Thr Glu Val Asp Thr Phe His Leu Asp Lys Tyr
268          115          120          125
270 Lys Thr Ile Lys Val Pro Met Met Tyr Ser Ala Gly Lys Phe Ala Ser
271          130          135          140
273 Thr Phe Asp Lys Asn Phe Arg Cys His Val Leu Lys Leu Pro Tyr Gln
274 145          150          155          160
276 Gly Asn Ala Thr Met Leu Val Val Leu Met Glu Lys Met Gly Asp His
277          165          170          175
279 Leu Ala Leu Glu Asp Tyr Leu Thr Thr Asp Leu Val Glu Thr Trp Leu
280          180          185          190
282 Arg Asn Met Lys Thr Arg Asn Met Glu Val Phe Phe Pro Lys Phe Lys
283          195          200          205
285 Leu Asp Gln Lys Tyr Glu Met His Glu Leu Leu Arg Gln Met Gly Ile
286          210          215          220
288 Arg Arg Ile Phe Ser Pro Phe Ala Asp Leu Ser Glu Leu Ser Ala Thr
289 225          230          235          240
291 Gly Arg Asn Leu Gln Val Ser Arg Val Leu Gln Arg Thr Val Ile Glu
292          245          250          255
294 Val Asp Glu Arg Gly Thr Glu Ala Val Ala Gly Ile Leu Ser Glu Ile
295          260          265          270
297 Thr Ala Tyr Ser Met Pro Pro Val Ile Lys Val Asp Arg Pro Phe His
298          275          280          285
300 Phe Met Ile Tyr Glu Glu Thr Ser Gly Met Leu Leu Phe Leu Gly Arg
301          290          295          300
303 Val Val Asn Pro Thr Leu Leu
304 305          310
307 <210> SEQ ID NO: 7
308 <211> LENGTH: 215
309 <212> TYPE: PRT
310 <213> ORGANISM: Homo sapiens
312 <220> FEATURE:
313 <221> NAME/KEY: SITE
314 <222> LOCATION: (211)
315 <223> OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
317 <400> SEQUENCE: 7
318 His Glu Leu Arg Ser Trp Ala Ala Ala Arg Arg Thr Gly Ala His Arg
319 1          5          10          15
321 His Gly Cys Ser Ile Arg Ser Lys Trp His Ile Cys Ile Lys Pro Phe
322          20          25          30
324 Glu Lys Ala Arg Gly Lys Gln Leu Lys Gln Leu Ile Phe Phe Pro Met

```

→ Use of n and/or Xaa has been detected in the Sequence Listing.  
Review the Sequence Listing to insure a corresponding  
explanation is presented in the <220> to <223> fields of  
each sequence using n or Xaa.

VERIFICATION SUMMARY  
PATENT APPLICATION: US/09/912,628

DATE: 09/12/2001  
TIME: 11:52:24

Input Set : A:\Pto.amc  
Output Set: N:\CRF3\09122001\I912628.raw

L:8 M:270 C: Current Application Number differs, Replaced Current Application Number  
L:145 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4  
L:357 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:385 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8  
L:388 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8  
L:418 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8  
L:441 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:444 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:513 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13  
L:537 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14  
L:587 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15  
L:648 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16  
L:656 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16  
L:689 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17  
L:692 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17  
L:722 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17